SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT:
(A) NAME: FORBAIRT (trading as BioResearch Ireland)
(B) STREET: Glasnevin
(C) CITY: Dublin 9
(E) COUNTRY: Ireland
(F) POSTAL CODE (ZIP): none

(A) NAME: UNIVERSITY COLLEGE CORK
(B) STREET: College Road
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(E) COUNTRY: Ireland
(F) POSTAL CODE (ZIP): none

(A) NAME: McCARTHY, Thomas Valentine
(B) STREET: Vista Villa, Montenotte
(C) CITY: Cork
(E) COUNTRY: Ireland
(F) POSTAL CODE (ZIP): none

(A) NAME: VAUGHAN, Patrick Martin
(B) STREET: 175 West Avenue, Parkgate, Frankfield
(C) CITY: Cork
(E) COUNTRY: Ireland
(F) POSTAL CODE (ZIP): none

(ii) TITLE OF INVENTION: A method for the characterisation of nucleic acid molecules involving generation of extendible upstream DNA fragments resulting from the cleavage of nucleic acid at an abasic site

(iii) NUMBER OF SEQUENCES: 32

(iv) COMPUTER READABLE FORM:
(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)

(2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 93 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(F) TISSUE TYPE: Skeletal muscle

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

TCCAAGGAGA AGCTGGATGT GGCCCCCAAG CGGGATGTGG AGGGCATGGG CCCCCCTGAG 60

ATCAAGTACG GGGAGTCACT GTGCTTCGTG CAG 93

(2) INFORMATION FOR SEQ ID NO: 2:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 93 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "DNA generated by PCR amplification"

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

TCCAAGGAGA AGCTGGATGT GGCCCCCAAG CGGGAUGUGG AGGGCAUGGG CCCCCCUGAG 60

AUCAAGUACG GGGAGUCACU GUGCUUCGUG CAG 93

(2) INFORMATION FOR SEQ ID NO: 3:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 93 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "DNA generated by PCR amplification"

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

CTGCACGAAG CACAGTGACT CCCCGUACUU GAUCUCAGGG GGGCCCAUGC CCUCCACAUC 60

CCGCUUGGGG GCCACAUCCA GCUUCUCCUU GGA 93

(2) INFORMATION FOR SEQ ID NO: 4:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 25 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "DNA generated by glycosylase mediated cleavage and has a 3' phosphate group"

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

CTGCACGAAG CACAGTGACT CCCCG 25

(2) INFORMATION FOR SEQ ID NO: 5:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 25 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "DNA generated by glycosylase mediated cleavage and has a 3' hydroxyl group"

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

CTGCACGAAG CACAGTGACT CCCCG 25

(2) INFORMATION FOR SEQ ID NO: 6:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 93 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "DNA generated by glycosylase mediated cleavage followed by extension of upstream fragment"

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

CTGCACGAAG CACAGTGACT CCCCGTACTT GATCTCAGGG GGGCCCATGC CCTCCACATC 60

CCGCTTGGGG GCCACATCCA GCTTCTCCTT GGA 93

(2) INFORMATION FOR SEQ ID NO: 7:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 273 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(F) TISSUE TYPE: Skeletal muscle

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

TCCAAGGAGA AGCTGGATGT GGCCCCCAAG CGGGATGTGG AGGGCATGGG CCCCCCTGAG 60

ATCAAGTACG GGGAGTCACT GTGCTTCGTG CAGCATGTGG CCTCAGGACT GTGGCTCACC 120

TATGCCGCTC CAGACCCCAA GGCCCTGCGG CTCGGCGTGC TCAAGAAGAA GGCCATGCTG 180

CACCAGGAGG GCCACATGGA CGACGCACTG TCGCTGACCC GCTGCCAGCA GGAGGAGTCC 240

CAGGCCGCCC GCATGATCCA CAGCACCAAT GGC 273

(2) INFORMATION FOR SEQ ID NO: 8:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 273 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(F) TISSUE TYPE: Skeletal muscle

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

TCCAAGGAGA AGCTGGATGT GGCCCCCAAG CGGGATGTGG AGGGCATGGG CCCCCCTGAG 60

ATCAAGTACA GGGAGTCACT GTGCTTCGTG CAGCATGTGG CCTCAGGACT GTGGCTCACC 120

TATGCCGCTC CAGACCCCAA GGCCCTGCGG CTCGGCGTGC TCAAGAAGAA GGCCATGCTG 180

CACCAGGAGG GCCACATGGA CGACGCACTG TCGCTGACCC GCTGCCAGCA GGAGGAGTCC 240

CAGGCCGCCC GCATGATCCA CAGCACCAAT GGC 273

(2) INFORMATION FOR SEQ ID NO: 9:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 196 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "DNA generated by glycosylase mediated cleavage and upstream fragment extension, and has a 3' hydrogen atom"

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:
(A) NAME/KEY: modified_base
(B) LOCATION:196
(D) OTHER INFORMATION:/mod_base= OTHER
/note= "Dideoxy T"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

GCCATTGGTG CTGTGGATCA TGCGGGCGGC CTGGGACTCC TCCTGCTGGC AGCGGGTCAG 60

CGACAGTGCG TCGTCCATGT GGCCCTCCTG GTGCAGCATG GCCTTCTTCT TGAGCACGCC 120

GAGCCGCAGG GCCTTGGGGT CTGGAGCGGC ATAGGTGAGC CACAGTCCTG AGGCCACATG 180

CTGCACGAAG CACAGT 196

(2) INFORMATION FOR SEQ ID NO: 10:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 200 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "DNA generated by glycosylase mediated cleavage followed by upstream fragment extension, and has a 3' hydrogen atom"

(iii) HYPOTHETICAL: NO

(ix) FEATURE:
(A) NAME/KEY: modified_base
(B) LOCATION:200
(D) OTHER INFORMATION:/mod_base= OTHER
/note= "Dideoxy T"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

GCCATTGGTG CTGTGGATCA TGCGGGCGGC CTGGGACTCC TCCTGCTGGC AGCGGGTCAG 60

CGACAGTGCG TCGTCCATGT GGCCCTCCTG GTGCAGCATG GCCTTCTTCT TGAGCACGCC 120

GAGCCGCAGG GCCTTGGGGT CTGGAGCGGC ATAGGTGAGC CACAGTCCTG AGGCCACATG 180

CTGCACGAAG CACAGTGACT 200

(2) INFORMATION FOR SEQ ID NO: 11:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 204 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "DNA generated by glycosylase mediated cleavage followed by upstream fragment extension, and has a 3' hydrogen atom"

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:
(A) NAME/KEY: modified_base
(B) LOCATION:204
(D) OTHER INFORMATION:/note= "Dideoxy T"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

GCCATTGGTG CTGTGGATCA TGCGGGCGGC CTGGGACTCC TCCTGCTGGC AGCGGGTCAG 60

CGACAGTGCG TCGTCCATGT GGCCCTCCTG GTGCAGCATG GCCTTCTTCT TGAGCACGCC 120

GAGCCGCAGG GCCTTGGGGT CTGGAGCGGC ATAGGTGAGC CACAGTCCTG AGGCCACATG 180

CTGCACGAAG CACAGTGACT CCCT 204

(2) INFORMATION FOR SEQ ID NO: 12:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 206 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "DNA generated by glycosylase mediated cleavage and followed by upstream fragment extension, and has a 3' hydrogen atom"

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:
(A) NAME/KEY: modified_base
(B) LOCATION:206
(D) OTHER INFORMATION:/note= "Dideoxy T"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

GCCATTGGTG CTGTGGATCA TGCGGGCGGC CTGGGACTCC TCCTGCTGGC AGCGGGTCAG 60

CGACAGTGCG TCGTCCATGT GGCCCTCCTG GTGCAGCATG GCCTTCTTCT TGAGCACGCC 120

GAGCCGCAGG GCCTTGGGGT CTGGAGCGGC ATAGGTGAGC CACAGTCCTG AGGCCACATG 180

CTGCACGAAG CACAGTGACT CCCCGT 206

(2) INFORMATION FOR SEQ ID NO: 13:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 209 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "DNA generated by glycosylase mediated cleavage followed by upstream fragment extension, and has a 3' hydrogen atom"

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:
(A) NAME/KEY: modified_base
(B) LOCATION:209
(D) OTHER INFORMATION:/mod_base= OTHER
/note= "Dideoxy T"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

GCCATTGGTG CTGTGGATCA TGCGGGCGGC CTGGGACTCC TCCTGCTGGC AGCGGGTCAG 60

CGACAGTGCG TCGTCCATGT GGCCCTCCTG GTGCAGCATG GCCTTCTTCT TGAGCACGCC 120

GAGCCGCAGG GCCTTGGGGT CTGGAGCGGC ATAGGTGAGC CACAGTCCTG AGGCCACATG 180

CTGCACGAAG CACAGTGACT CCCCGTACT 209

(2) INFORMATION FOR SEQ ID NO: 14:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 204 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "DNA generated by glycosylase mediated cleavage followed by upstream fragment extension, and has a 3' hydrogen atom"

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:
(A) NAME/KEY: modified_base
(B) LOCATION:204
(D) OTHER INFORMATION:/mod_base= OTHER
/note= "Dideoxy C"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

GCCATTGGTG CTGTGGATCA TGCGGGCGGC CTGGGACTCC TCCTGCTGGC AGCGGGTCAG 60

CGACAGTGCG TCGTCCATGT GGCCCTCCTG GTGCAGCATG GCCTTCTTCT TGAGCACGCC 120

GAGCCGCAGG GCCTTGGGGT CTGGAGCGGC ATAGGTGAGC CACAGTCCTG AGGCCACATG 180

CTGCACGAAG CACAGTGACT CCCC 204

(2) INFORMATION FOR SEQ ID NO: 15:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 54 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

AACTTGTGGT AGTTGGAGCT GGTGGCGTAG GCAAGAGTGC CTTGACGATA CAGC 54

(2) INFORMATION FOR SEQ ID NO: 16:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 54 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "Generated by PCR amplification of genomic DNA"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

AACTTGTGGT AGTTGGAGCT GGUGGCGUAG GCAAGAGUGC CUUGACGAUA CAGC 54

(2) INFORMATION FOR SEQ ID NO: 17:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 54 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "Generated by PCR amplification of genomic DNA"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

GCTGTATCGT CAAGGCACTC TTGCCTACGC CACCAGCUCC AACUACCACA AGUU 54

(2) INFORMATION FOR SEQ ID NO: 18:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 54 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "Generated by PCR amplification of genomic DNA"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

AACTTGTGGT AGTTGGAGCT GAUGGCGUAG GCAAGAGUGC CUUGACGAUA CAGC 54

(2) INFORMATION FOR SEQ ID NO: 19:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 54 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "Generated by PCR amplification"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

GCTGTATCGT CAAGGCACTC TTGCCTACGC CAUCAGCUCC AACUACCACA AGUU 54

(2) INFORMATION FOR SEQ ID NO: 20:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 37 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "Generated by glycosylase mediated cleavage of PCR amplified DNA"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

GCTGTATCGT CAAGGCACTC TTGCCTACGC CACCAGC 37

(2) INFORMATION FOR SEQ ID NO: 21:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 32 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "Generated by glycosylase mediated cleavage of PCR amplified DNA"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

GCTGTATCGT CAAGGCACTC TTGCCTACGC CA 32

(2) INFORMATION FOR SEQ ID NO: 22:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 66 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "synthetic oligonucleotide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

GCTGTAAACG ACGGCCAGTT TCATGCAGGG CTGGAGTCGT AGGCAAGAGT GCCTTGACGA 60

TACAGC 66

(2) INFORMATION FOR SEQ ID NO: 23:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "synthetic oligonucleotide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

GCTGTAAACG ACGGCCAGTT TCAT 24

(2) INFORMATION FOR SEQ ID NO: 24:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 66 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "Generated by primer extension"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

GCTGTATCGT CAAGGCACTC TTGCCTACGC CACCAGCCCT GCATGAAACT GGCCGTCGTT 60

TACAGC 66

(2) INFORMATION FOR SEQ ID NO: 25:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 66 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "synthetic oligonucleotide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

GCTGTAAACG ACGGCCAGTT TCATGCAGGA TCCATGGCGT AGGCAAGAGT GCCTTGACGA 60

TACAGC 66

(2) INFORMATION FOR SEQ ID NO: 26:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 66 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "Generated by primer extension"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

GCTGTATCGT CAAGGCACTC TTGCCTACGC CATGGATCCT GCATGAAACT GGCCGTCGTT 60

TACAGC 66

(2) INFORMATION FOR SEQ ID NO: 27:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "synthetic oligonucleotide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

GGTAGTTGGA GCTGGTGGCG 20

(2) INFORMATION FOR SEQ ID NO: 28:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "synthetic oligonucleotide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

TCCAACTACC 10

(2) INFORMATION FOR SEQ ID NO: 29:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 47 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "Generated by ligation of two DNA molecules"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

GCTGTATCGT CAAGGCACTC TTGCCTACGC CACCAGCTCC AACTACC 47

(2) INFORMATION FOR SEQ ID NO: 30:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "synthetic oligonucleotide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

CCAGCTCCAA 10

(2) INFORMATION FOR SEQ ID NO: 31:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "synthetic oligonucleotide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

TTGGAGCTGG TGGCGTAGGC 20

(2) INFORMATION FOR SEQ ID NO: 32:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 42 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid
(A) DESCRIPTION: /desc = "Generated by ligation of two DNA molecules"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

GCTGTATCGT CAAGGCACTC TTGCCTACGC CACCAGCTCC AA 42